

Serial No.: 10/611,692

PU030182

Remarks

In view of the following discussion, the applicants submit that none of the claims now pending in the application are anticipated under the provisions of 35 U. S. C. § 102, or obvious under the provisions of 35 U. S. C. § 103. Thus, the applicants believe that all of these claims are in allowable form.

REJECTIONS

A. 35 U. S. C. § 102

1. Claims 12, 17 and 20 are not anticipated by Kuzma

Claims 12, 17 and 20 stand rejected under 35 U. S. C. § 102(b) as being anticipated by Kuzma (U. S. Patent 5,130,897 Issued July 14, 1992). The applicants submit that these claims are not anticipated by this reference.

Claim 12 is directed to a remote control 1 including a housing 2, 6, a circuit board 5, a keypad 4 and a light pipe 3 (see, FIG. 1 and the specification at page 3, lines 2-4). The circuit board 5 includes at least one surface mounted light emitting diode 14 (see, FIG. 1 and the specification at page 3, lines 6-8). The keypad 4 has a base 12 that is positioned on a top surface 16 of the circuit board 5 and includes a plurality of buttons 9 extending away from the circuit board 5 and at least one slot 15 corresponding to the at least one surface mounted light emitting diode 14 (see, FIGS. 1 and 4 and the specification at page 3, lines 12-19). The light pipe 3 includes openings 8 corresponding to the buttons 9 of the keypad 4 and is positioned on the keypad 4 such that the buttons 9 extend through the openings therein 8 and light is dispersed through the light pipe 3 to the buttons 9 (see, FIG. 1 and the specification at page 3, line 21 to page 4, line 9).

Serial No.: 10/611,692

PU030182

Kuzma describes an illuminated telephone dial (*see*, Kuzma at column 1, lines 5-7). The telephone dial includes a dial frame 10, a light guide 20, buttons 30, a membrane switch 40, a flexible wiring trace 50 and a circuit board 60 (*see* Kuzma at FIG. 1 and column 3, lines 38-42). The circuit board 60 supports a pair of vertically mounted LEDs 400 (*see*, Kuzma at FIG. 1 and column 3, lines 47-48). The flexible wiring trace 50 is positioned on a top surface of the circuit board 60 (*see*, Kuzma at FIG. 1). The membrane switch 40 and buttons 30 may be combined in a single structure and is positioned on the flexible wiring trace 50 (*see*, Kuzma at FIG. 1 and column 4, lines 1-14). The light guide 20 has apertures 210 arranged therein to accommodate the buttons 30 above the membrane switch 40 (*see*, Kuzma at FIG. 1 and column 4, line 30-61). The dial frame is positioned above the light guide 20 (*see*, Kuzma at FIG. 1).

Kuzma does not describe or suggest a remote control including a housing, a circuit board, a keypad and a light pipe where the keypad has a base that is positioned on a top surface of the circuit board and the light pipe is positioned on the keypad so light is dispersed through the light pipe to the buttons. Rather, Kuzma teaches an illuminated telephone dial including a dial frame, a light guide, buttons, a membrane switch, a flexible wiring trace and a circuit board, where the flexible wiring trace is positioned on a top surface of the circuit board instead of a keypad. Since Kuzma does not describe or suggest a remote control including a housing, a circuit board, a keypad and a light pipe where the keypad has a base that is positioned on a top surface of the circuit board and the light pipe is positioned on the keypad so light is dispersed through the light pipe to the buttons, claim 12 is patentable over Kuzma.

Claims 17 and 20 depend directly from claim 12. In view of this dependency the applicants submit that claims 17 and 20 are also patentable over Kuzma.

Serial No.: 10/611,692

PU030182

B. 35 U. S. C. § 103

1. Claims 1-4 and 9-11 are not obvious over Kuzma in view of Park

Claims 1-4 and 9-11 stand rejected under 35 U. S. C. § 103(a) as being obvious over Kuzma (U. S. Patent 5,130,897 issues July 14 1992) in view of Park (U. S. Patent 5,568,367 issued October 1, 1991). The applicants submit that these claims are not rendered obvious by the combination of these references.

Claim 1 is directed to a remote control 1 including a housing 2, 6, a circuit board 5, a keypad 4 and a light pipe 3 (*see*, FIG. 1 and the specification at page 3, lines 2-4). The housing includes a top cover 2 with a plurality of apertures 20 and a bottom cover 6 (*see*, FIG. 1 and the specification at page 3, lines 2-3). The circuit board 5 includes at least one surface mounted light emitting diode 14 (*see*, FIG. 1 and the specification at page 3, lines 6-8). The keypad 4 has a base 12 positioned on the circuit board 5 with a plurality of buttons 9 extending away from the circuit board 5 and at least one slot 15 corresponding to the at least one surface mounted light emitting diode 14 (*see*, FIGS. 1 and 4 and the specification at page 3, lines 12-19). The light pipe 3 is positioned on a top surface 12 of the keypad 4 between the top cover 2 of the housing and the keypad 4 so light is dispersed through the light pipe 3 to the plurality of buttons 9 (*see*, FIG. 1 and the specification at page 3, line 21 to page 4, line 9).

Kuzma describes an illuminated telephone dial (*see*, Kuzma at column 1, lines 5-7). The telephone dial includes a dial frame 10, a light guide 20, buttons 30, a membrane switch 40, a flexible wiring trace 50 and a circuit board 60 (*see* Kuzma at FIG. 1 and column 3, lines 38-42). The circuit board 60 supports a pair of vertically mounted LEDs 400 (*see*, Kuzma at FIG. 1 and column 3, lines 47-48). The flexible wiring trace 50 is positioned on a top surface of the circuit board 60 (*see*, Kuzma at FIG. 1). The membrane switch 40 and buttons 30 may be combined in a single structure and is positioned on the flexible wiring trace 50 (*see*, Kuzma at FIG. 1 and column 4, lines 1-14). The light guide 20 has

Serial No.: 10/611,692

PU030182

apertures 210 arranged therein to accommodate the buttons 30 above the membrane switch 40 (*see*, Kuzma at FIG. 1 and column 4, line 30-61). The dial frame is positioned above the light guide 20 (*see*, Kuzma at FIG. 1).

Kuzma does not describe or suggest a remote control including a housing, a circuit board, a keypad and a light pipe where the keypad has a base that is positioned on a top surface of the circuit board and the light pipe is positioned on the top surface of the keypad between a top cover of the housing and the keypad so light is dispersed through the light pipe to the buttons. Rather, Kuzma teaches a different arrangement including an illuminated telephone dial including a dial frame, a light guide, buttons, a membrane switch, a flexible wiring trace and a circuit board, where the flexible wiring trace is positioned on a top surface of the circuit board instead of a keypad. Since Kuzma does not describe or suggest a remote control including a housing, a circuit board, a keypad and a light pipe where the keypad has a base that is positioned on a top surface of the circuit board and the light pipe is positioned on the top surface of the keypad between a top cover of the housing and the keypad so light is dispersed through the light pipe to the buttons, claim 1 is patentable over Kuzma.

Park describes a remote control with key lighting (*see*, Park at column 1, lines 6-7). The remote control 8 includes a housing 12, 14, a circuit board 20, a spacer plate 28, a contact plate 30, a locating plate 40 and a transparent elastomeric plate 26 (*see*, Park at FIG. 4 and column 3, line 35 to column 4, line 34). The circuit board 20 includes a plurality of light emitting elements 21 as well as contacts 31 (*see*, Park at FIG. 4 and column 3, lines 45-60). The spacer plate 28 is positioned directly above the circuit board 20 and includes openings for the light emitting elements 21 and the contacts 31 (*see*, Park at FIG. 4 and column 3, lines 58-59). The contact plate 30 positioned on the spacer includes openings above the light emitting elements 21 and is adapted to make contact with the contacts 31 on the circuit board 20 (*see*, Park at FIG. 4 and column 3, lines 58-62). The locating plate 40 with openings 41 above contacts 31 is positioned on the contact plate 30 (*see*, Park at FIG. 4 and column 4, lines 12-16). The

Serial No.: 10/611,692

PU030182

transparent elastomeric plate 26 is seated on the locating plate 40 with push-buttons 52 extending downward through openings 41 to make contact plate 30 touch contacts 31 (see, Park at FIG. 4 and column 4, lines 26-57).

Park does not describe or suggest a remote control including a housing, a circuit board, a keypad and a light pipe where the keypad has a base that is positioned on a top surface of the circuit board and the light pipe is positioned on the top surface of the keypad between a top cover of the housing and the keypad so light is dispersed through the light pipe to the buttons. Rather, Park teaches a completely different arrangement in which a transparent elastomeric plate with push-buttons extending downward therefrom is seated in openings on a locating plate. Since Park does not describe or suggest a remote control including a housing, a circuit board, a keypad and a light pipe where the keypad has a base that is positioned on a top surface of the circuit board and the light pipe is positioned on the top surface of the keypad between a top cover of the housing and the keypad so light is dispersed through the light pipe to the buttons, claim 1 is patentable over Park.

Furthermore, since Kuzma only teaches an arrangement including an illuminated telephone dial including a dial frame, a light guide, buttons, a membrane switch, a flexible wiring trace and a circuit board, where the flexible wiring trace is positioned on a top surface of the circuit board instead of a keypad and Park teaches an arrangement in which a transparent elastomeric plate with push-buttons extending downward therefrom is seated in openings on a locating plate, the combination of these references does not describe or suggest applicants' arrangement recited in claim 1. In particular, claim 1 recites a remote control including a housing, a circuit board, a keypad and a light pipe where the keypad has a base that is positioned on a top surface of the circuit board and the light pipe is positioned on the top surface of the keypad between a top cover of the housing and the keypad so light is dispersed through the light pipe to the buttons. Thus, claim 1 is patentable over the combination of these references.

Serial No.: 10/611,692

PU030182

Claims 2-4 and 9-11 depend directly from claim 1. In view of this dependency the applicants submit that claims 2-4 and 9-11 are also patentable over Kuzma in view of Park.

2. Claims 5-8 are not obvious over Kuzma in view of Park and further in view of Kuhfus

Claims 5-8 stand rejected under 35 U. S. C. § 103(a) as being obvious over Kuzma (U. S. Patent 5,130,897 issues July 14 1992) in view of Park (U. S. Patent 5,568,367 issued October 1, 1991) and further in view of Kuhfus (U. S. Patent 4,349,705 issued September 14, 1982). The applicants submit that these claims are not rendered obvious by the combination of these references.

Claim 5 is directed to a remote control 1 including a housing 2, 6, a circuit board 5, a keypad 4 and a light pipe 3 (*see*, FIG. 1 and the specification at page 3, lines 2-4). The housing includes a top cover 2 with a plurality of apertures 20 and a bottom cover 6 (*see*, FIG. 1 and the specification at page 3, lines 2-3). The circuit board 5 includes at least one surface mounted light emitting diode 14 (*see*, FIG. 1 and the specification at page 3, lines 6-8). The keypad 4 has a base 12 positioned on the circuit board 5 with a plurality of buttons 9 extending away from the circuit board 5 and at least one slot 15 corresponding to the at least one surface mounted light emitting diode 14 (*see*, FIGS. 1 and 4 and the specification at page 3, lines 12-19). The light pipe 3 is positioned on a top surface 12 of the keypad 4 between the top cover 2 of the housing and the keypad 4 so light is dispersed through the light pipe 3 to the plurality of buttons 9 (*see*, FIG. 1 and the specification at page 3, line 21 to page 4, line 9).

Kuzma describes an illuminated telephone dial (*see*, Kuzma at column 1, lines 5-7). The telephone dial includes a dial frame 10, a light guide 20, buttons 30, a membrane switch 40, a flexible wiring trace 50 and a circuit board 60 (*see* Kuzma at FIG. 1 and column 3, lines 38-42). The circuit board 60 supports a pair of vertically mounted LEDs 400 (*see*, Kuzma at FIG. 1 and column 3, lines 47-

Serial No.: 10/611,692

PU030182

48). The flexible wiring trace 50 is positioned on a top surface of the circuit board 60 (see, Kuzma at FIG. 1). The membrane switch 40 and buttons 30 may be combined in a single structure and is positioned on the flexible wiring trace 50 (see, Kuzma at FIG. 1 and column 4, lines 1-14). The light guide 20 has apertures 210 arranged therein to accommodate the buttons 30 above the membrane switch 40 (see, Kuzma at FIG. 1 and column 4, line 30-61). The dial frame is positioned above the light guide 20 (see, Kuzma at FIG. 1).

Kuzma does not describe or suggest a remote control including a housing, a circuit board, a keypad and a light pipe where the keypad has a base that is positioned on a top surface of the circuit board and the light pipe is positioned on the top surface of the keypad between a top cover of the housing and the keypad so light is dispersed through the light pipe to the buttons. Rather, Kuzma teaches a different arrangement including an illuminated telephone dial including a dial frame, a light guide, buttons, a membrane switch, a flexible wiring trace and a circuit board, where the flexible wiring trace is positioned on a top surface of the circuit board instead of a keypad. Since Kuzma does not describe or suggest a remote control including a housing, a circuit board, a keypad and a light pipe where the keypad has a base that is positioned on a top surface of the circuit board and the light pipe is positioned on the top surface of the keypad between a top cover of the housing and the keypad so light is dispersed through the light pipe to the buttons, claim 5 is patentable over Kuzma.

Park describes a remote control with key lighting (see, Park at column 1, lines 6-7). The remote control 8 includes a housing 12, 14, a circuit board 20, a spacer plate 28, a contact plate 30, a locating plate 40 and a transparent elastomeric plate 26 (see, Park at FIG. 4 and column 3, line 35 to column 4, line 34). The circuit board 20 includes a plurality of light emitting elements 21 as well as contacts 31 (see, Park at FIG. 4 and column 3, lines 45-60). The spacer plate 28 is positioned directly above the circuit board 20 and includes openings for the light emitting elements 21 and the contacts 31 (see, Park at FIG. 4 and column 3, lines 58-59). The contact plate 30 positioned on the spacer includes openings

Serial No.: 10/611,692

PU030182

above the light emitting elements 21 and is adapted to make contact with the contacts 31 on the circuit board 20 (see, Park at FIG. 4 and column 3, lines 58-62). The locating plate 40 with openings 41 above contacts 31 is positioned on the contact plate 30 (see, Park at FIG. 4 and column 4, lines 12-16). The transparent elastomeric plate 26 is seated on the locating plate 40 with push-buttons 52 extending downward through openings 41 to make contact plate 30 touch contacts 31 (see, Park at FIG. 4 and column 4, lines 26-57).

Park does not describe or suggest a remote control including a housing, a circuit board, a keypad and a light pipe where the keypad has a base that is positioned on a top surface of the circuit board and the light pipe is positioned on the top surface of the keypad between a top cover of the housing and the keypad so light is dispersed through the light pipe to the buttons. Rather, Park teaches a completely different arrangement in which a transparent elastomeric plate with push-buttons extending downward therefrom is seated in openings on a locating plate. Since Park does not describe or suggest a remote control including a housing, a circuit board, a keypad and a light pipe where the keypad has a base that is positioned on a top surface of the circuit board and the light pipe is positioned on the top surface of the keypad between a top cover of the housing and the keypad so light is dispersed through the light pipe to the buttons, claim 5 is patentable over Park.

Kuhfus describes a lighted telephone dial (see, Kuhfus at column 1, lines 4-5). In Kuhfus, a light guide plate 25 is positioned on an LED frame 62 which is positioned on a pushbutton member 21 (see, Kuhfus at FIG. 1).

Kuhfus does not describe or suggest a remote control including a housing, a circuit board, a keypad and a light pipe where the keypad has a base that is positioned on a top surface of the circuit board and the light pipe is positioned on the top surface of the keypad between a top cover of the housing and the keypad so light is dispersed through the light pipe to the buttons. Rather, Kuhfus teaches a completely different arrangement in which a light guide plate of a telephone dial is positioned on an LED frame which is positioned on a pushbutton member.

Serial No.: 10/611,692

PU030182

Since Kuhfus does not describe or suggest a remote control including a housing, a circuit board, a keypad and a light pipe where the keypad has a base that is positioned on a top surface of the circuit board and the light pipe is positioned on the top surface of the keypad between a top cover of the housing and the keypad so light is dispersed through the light pipe to the buttons, claim 5 is patentable over Kuhfus.

Furthermore, since Kuzma only teaches an arrangement including an illuminated telephone dial including a dial frame, a light guide, buttons, a membrane switch, a flexible wiring trace and a circuit board, where the flexible wiring trace is positioned on a top surface of the circuit board instead of a keypad, Park teaches an arrangement in which a transparent elastomeric plate with push-buttons extending downward therefrom is seated in openings on a locating plate and Kuhfus only teaches a light guide plate of a telephone dial positioned on an LED frame which is positioned on a pushbutton member, the combination of these references does not describe or suggest applicants' arrangement recited in claim 5. In particular, claim 5 recites a remote control including a housing, a circuit board, a keypad and a light pipe where the keypad has a base that is positioned on a top surface of the circuit board and the light pipe is positioned on the top surface of the keypad between a top cover of the housing and the keypad so light is dispersed through the light pipe to the buttons. Thus, claim 5 is patentable over the combination of these references.

Claims 6-8 depend directly, or indirectly, from claim 5. In view of this dependency the applicants submit that claims 6-8 are also patentable over Kuzma in view of Park and further in view of Kuhfus.

3. Claims 13-16 are not obvious over Kuzma in view of Kuhfus

Claims 13-16 stand rejected under 35 U. S. C. § 103(a) as being obvious over Kuzma (U. S. Patent 5,130,897 issues July 14 1992) in view of Kuhfus

Serial No.: 10/611,692

PU030182

(U. S. Patent 4,349,705 Issued September 14, 1982). The applicants submit that these claims are not rendered obvious by the combination of these references.

Claim 13 is directed to a remote control 1 including a housing 2, 6, a circuit board 5, a keypad 4 and a light pipe 3 (*see*, FIG. 1 and the specification at page 3, lines 2-4). The circuit board 5 includes at least one surface mounted light emitting diode 14 (*see*, FIG. 1 and the specification at page 3, lines 6-8). The keypad 4 has a base 12 that is positioned on a top surface 16 of the circuit board 5 and includes a plurality of buttons 9 extending away from the circuit board 5 and at least one slot 15 corresponding to the at least one surface mounted light emitting diode 14 (*see*, FIGS. 1 and 4 and the specification at page 3, lines 12-19). The light pipe 3 includes openings 8 corresponding to the buttons 9 of the keypad 4 and is positioned on the keypad 4 such that the buttons 9 extend through the openings therein 8 and light is dispersed through the light pipe 3 to the buttons 9 (*see*, FIG. 1 and the specification at page 3, line 21 to page 4, line 9).

Kuzma describes an illuminated telephone dial (*see*, Kuzma at column 1, lines 5-7). The telephone dial includes a dial frame 10, a light guide 20, buttons 30, a membrane switch 40, a flexible wiring trace 50 and a circuit board 60 (*see* Kuzma at FIG. 1 and column 3, lines 38-42). The circuit board 60 supports a pair of vertically mounted LEDs 400 (*see*, Kuzma at FIG. 1 and column 3, lines 47-48). The flexible wiring trace 50 is positioned on a top surface of the circuit board 60 (*see*, Kuzma at FIG. 1). The membrane switch 40 and buttons 30 may be combined in a single structure and is positioned on the flexible wiring trace 50 (*see*, Kuzma at FIG. 1 and column 4, lines 1-14). The light guide 20 has apertures 210 arranged therein to accommodate the buttons 30 above the membrane switch 40 (*see*, Kuzma at FIG. 1 and column 4, line 30-61). The dial frame is positioned above the light guide 20 (*see*, Kuzma at FIG. 1).

Kuzma does not describe or suggest a remote control including a housing, a circuit board, a keypad and a light pipe where the keypad has a base that is positioned on a top surface of the circuit board and the light pipe is positioned on

Serial No.: 10/611,692

PU030182

the keypad so light is dispersed through the light pipe to the buttons. Rather, Kuzma teaches an illuminated telephone dial including a dial frame, a light guide, buttons, a membrane switch, a flexible wiring trace and a circuit board, where the flexible wiring trace is positioned on a top surface of the circuit board instead of a keypad. Since Kuzma does not describe or suggest a remote control including a housing, a circuit board, a keypad and a light pipe where the keypad has a base that is positioned on a top surface of the circuit board and the light pipe is positioned on the keypad so light is dispersed through the light pipe to the buttons, claim 12 is patentable over Kuzma.

Kuhfus describes a lighted telephone dial (*see*, Kuhfus at column 1, lines 4-5). In Kuhfus, a light guide plate 25 is positioned on an LED frame 62 which is positioned on a pushbutton member 21 (*see*, Kuhfus at FIG. 1).

Kuhfus does not describe or suggest a remote control including a housing, a circuit board, a keypad and a light pipe where the keypad has a base that is positioned on a top surface of the circuit board and the light pipe is positioned on the keypad so light is dispersed through the light pipe to the buttons. Rather, Kuhfus teaches a completely different arrangement in which a light guide plate of a telephone dial is positioned on an LED frame which is positioned on a pushbutton member. Since Kuhfus does not describe or suggest a remote control including a housing, a circuit board, a keypad and a light pipe where the keypad has a base that is positioned on a top surface of the circuit board and the light pipe is positioned on the keypad so light is dispersed through the light pipe to the buttons, claim 13 is patentable over Kuhfus.

Furthermore, since Kuzma only teaches an arrangement including an illuminated telephone dial including a dial frame, a light guide, buttons, a membrane switch, a flexible wiring trace and a circuit board, where the flexible wiring trace is positioned on a top surface of the circuit board instead of a keypad and Kuhfus only teaches a light guide plate of a telephone dial positioned on an LED frame which is positioned on a pushbutton member, the combination of these references does not describe or suggest applicants' arrangement recited in

Serial No.: 10/611,692

PU030182

claim 13. In particular, claim 13 recites a remote control including a housing, a circuit board, a keypad and a light pipe where the keypad has a base that is positioned on a top surface of the circuit board and the light pipe is positioned on the keypad so light is dispersed through the light pipe to the buttons. Thus, claim 13 is patentable over the combination of these references.

Claims 14-16 depend directly, or indirectly, from claim 13. In view of this dependency the applicants submit that claims 14-16 are also patentable over Kuzma in view of Kuhfus.

4. Claim 18 is not obvious over Kuzma

Claim 18 stands rejected under 35 U. S. C. § 103(a) as being obvious over Kuzma (U. S. Patent 5,130,897 issues July 14 1992). The applicants submit that this claim is not rendered obvious by this reference.

Claim 18 is directed to a remote control 1 including a housing 2, 6, a circuit board 5, a keypad 4 and a light pipe 3 (see, FIG. 1 and the specification at page 3, lines 2-4). The circuit board 5 includes at least one surface mounted light emitting diode 14 (see, FIG. 1 and the specification at page 3, lines 6-8). The keypad 4 has a base 12 that is positioned on a top surface 16 of the circuit board 5 and includes a plurality of buttons 9 extending away from the circuit board 5 and at least one slot 15 corresponding to the at least one surface mounted light emitting diode 14 (see, FIGS. 1 and 4 and the specification at page 3, lines 12-19). The light pipe 3 includes openings 8 corresponding to the buttons 9 of the keypad 4 and is positioned on the keypad 4 such that the buttons 9 extend through the openings therein 8 and light is dispersed through the light pipe 3 to the buttons 9 (see, FIG. 1 and the specification at page 3, line 21 to page 4, line 9).

Kuzma describes an illuminated telephone dial (see, Kuzma at column 1, lines 5-7). The telephone dial includes a dial frame 10, a light guide 20, buttons 30, a membrane switch 40, a flexible wiring trace 50 and a circuit board 60 (see

Serial No.: 10/611,692

PU030182

Kuzma at FIG. 1 and column 3, lines 38-42). The circuit board 60 supports a pair of vertically mounted LEDs 400 (*see*, Kuzma at FIG. 1 and column 3, lines 47-48). The flexible wiring trace 50 is positioned on a top surface of the circuit board 60 (*see*, Kuzma at FIG. 1). The membrane switch 40 and buttons 30 may be combined in a single structure and is positioned on the flexible wiring trace 50 (*see*, Kuzma at FIG. 1 and column 4, lines 1-14). The light guide 20 has apertures 210 arranged therein to accommodate the buttons 30 above the membrane switch 40 (*see*, Kuzma at FIG. 1 and column 4, line 30-61). The dial frame is positioned above the light guide 20 (*see*, Kuzma at FIG. 1).

Kuzma does not describe or suggest a remote control including a housing, a circuit board, a keypad and a light pipe where the keypad has a base that is positioned on a top surface of the circuit board and the light pipe is positioned on the keypad so light is dispersed through the light pipe to the buttons. Rather, Kuzma teaches an illuminated telephone dial including a dial frame, a light guide, buttons, a membrane switch, a flexible wiring trace and a circuit board, where the flexible wiring trace is positioned on a top surface of the circuit board instead of a keypad. Since Kuzma does not describe or suggest a remote control including a housing, a circuit board, a keypad and a light pipe where the keypad has a base that is positioned on a top surface of the circuit board and the light pipe is positioned on the keypad so light is dispersed through the light pipe to the buttons, claim 18 is patentable over Kuzma.

5. Claim 19 is not obvious over Kuzma in view of Park

Claim 19 stands rejected under 35 U. S. C. § 103(a) as being obvious over Kuzma (U. S. Patent 5,130,897 Issues July 14 1992) in view of Park (U. S. Patent 5,568,367 issued October 1, 1991). The applicants submit that this claim is not rendered obvious by the combination of these references.

Claim 19 is directed to a remote control 1 including a housing 2, 6, a circuit board 5, a keypad 4 and a light pipe 3 (*see*, FIG. 1 and the specification at

Serial No.: 10/611,692

PU030182

page 3, lines 2-4). The housing includes a top cover 2 with a plurality of apertures 20 and a bottom cover 6 (see, FIG. 1 and the specification at page 3, lines 2-3). The circuit board 5 includes at least one surface mounted light emitting diode 14 (see, FIG. 1 and the specification at page 3, lines 6-8). The keypad 4 has a base 12 positioned on the circuit board 5 with a plurality of buttons 9 extending away from the circuit board 5 and at least one slot 15 corresponding to the at least one surface mounted light emitting diode 14 (see, FIGS. 1 and 4 and the specification at page 3, lines 12-19). The light pipe 3 is positioned on a top surface 12 of the keypad 4 between the top cover 2 of the housing and the keypad 4 so light is dispersed through the light pipe 3 to the plurality of buttons 9 (see, FIG. 1 and the specification at page 3, line 21 to page 4, line 9).

Kuzma describes an illuminated telephone dial (see, Kuzma at column 1, lines 5-7). The telephone dial includes a dial frame 10, a light guide 20, buttons 30, a membrane switch 40, a flexible wiring trace 50 and a circuit board 60 (see Kuzma at FIG. 1 and column 3, lines 38-42). The circuit board 60 supports a pair of vertically mounted LEDs 400 (see, Kuzma at FIG. 1 and column 3, lines 47-48). The flexible wiring trace 50 is positioned on a top surface of the circuit board 60 (see, Kuzma at FIG. 1). The membrane switch 40 and buttons 30 may be combined in a single structure and is positioned on the flexible wiring trace 50 (see, Kuzma at FIG. 1 and column 4, lines 1-14). The light guide 20 has apertures 210 arranged therein to accommodate the buttons 30 above the membrane switch 40 (see, Kuzma at FIG. 1 and column 4, line 30-61). The dial frame is positioned above the light guide 20 (see, Kuzma at FIG. 1).

Kuzma does not describe or suggest a remote control including a housing, a circuit board, a keypad and a light pipe where the keypad has a base that is positioned on a top surface of the circuit board and the light pipe is positioned on the top surface of the keypad between a top cover of the housing and the keypad so light is dispersed through the light pipe to the buttons. Rather, Kuzma teaches a different arrangement including an illuminated telephone dial including a dial frame, a light guide, buttons, a membrane switch, a flexible wiring trace and a

Serial No.: 10/611,692

PU030182

circuit board, where the flexible wiring trace is positioned on a top surface of the circuit board instead of a keypad. Since Kuzma does not describe or suggest a remote control including a housing, a circuit board, a keypad and a light pipe where the keypad has a base that is positioned on a top surface of the circuit board and the light pipe is positioned on the top surface of the keypad between a top cover of the housing and the keypad so light is dispersed through the light pipe to the buttons, claim 19 is patentable over Kuzma.

Park describes a remote control with key lighting (*see*, Park at column 1, lines 6-7). The remote control 8 includes a housing 12, 14, a circuit board 20, a spacer plate 28, a contact plate 30, a locating plate 40 and a transparent elastomeric plate 26 (*see*, Park at FIG. 4 and column 3, line 35 to column 4, line 34). The circuit board 20 includes a plurality of light emitting elements 21 as well as contacts 31 (*see*, Park at FIG. 4 and column 3, lines 45-60). The spacer plate 28 is positioned directly above the circuit board 20 and includes openings for the light emitting elements 21 and the contacts 31 (*see*, Park at FIG. 4 and column 3, lines 58-59). The contact plate 30 positioned on the spacer includes openings above the light emitting elements 21 and is adapted to make contact with the contacts 31 on the circuit board 20 (*see*, Park at FIG. 4 and column 3, lines 58-62). The locating plate 40 with openings 41 above contacts 31 is positioned on the contact plate 30 (*see*, Park at FIG. 4 and column 4, lines 12-16). The transparent elastomeric plate 26 is seated on the locating plate 40 with push-buttons 52 extending downward through openings 41 to make contact plate 30 touch contacts 31 (*see*, Park at FIG. 4 and column 4, lines 26-57).

Park does not describe or suggest a remote control including a housing, a circuit board, a keypad and a light pipe where the keypad has a base that is positioned on a top surface of the circuit board and the light pipe is positioned on the top surface of the keypad between a top cover of the housing and the keypad so light is dispersed through the light pipe to the buttons. Rather, Park teaches a completely different arrangement in which a transparent elastomeric plate with push-buttons extending downward therefrom is seated in openings on a locating

Serial No.: 10/611,692

PU030182

plate. Since Park does not describe or suggest a remote control including a housing, a circuit board, a keypad and a light pipe where the keypad has a base that is positioned on a top surface of the circuit board and the light pipe is positioned on the top surface of the keypad between a top cover of the housing and the keypad so light is dispersed through the light pipe to the buttons, claim 19 is patentable over Park.

Furthermore, since Kuzma only teaches an arrangement including an illuminated telephone dial including a dial frame, a light guide, buttons, a membrane switch, a flexible wiring trace and a circuit board, where the flexible wiring trace is positioned on a top surface of the circuit board instead of a keypad and Park teaches an arrangement in which a transparent elastomeric plate with push-buttons extending downward therefrom is seated in openings on a locating plate, the combination of these references does not describe or suggest applicants' arrangement recited in claim 19. In particular, claim 19 recites a remote control including a housing, a circuit board, a keypad and a light pipe where the keypad has a base that is positioned on a top surface of the circuit board and the light pipe is positioned on the top surface of the keypad between a top cover of the housing and the keypad so light is dispersed through the light pipe to the buttons. Thus, claim 19 is patentable over the combination of these references.

CONCLUSION


Thus, the applicants submit that none of the claims presently in the application are anticipated under the provisions of 35 U. S. C. § 102, or obvious under the provisions of 35 U. S. C. § 103. Consequently, the applicants believe that all of the claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

Serial No.: 10/611,692

PU030182

If, however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, it is requested that the Examiner telephone Ms. Patricia A. Verlangieri, at (609) 734-6867, so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,



Patricia A. Verlangieri, Attorney
Reg. No. 42,201
(609) 734-6867

Patent Operations
Thomson Inc.
P. O. Box 5312
Princeton, New Jersey 08543-5312

November 30, 2005